FLT ID: N960928	FM: KMCF	TO: KMCF
FLT NO:	BLK IN:	ATA:
ETD:	BLK OUT: 1629Z	ATD:
ETE:	BLK TIME: 2138Z	FLT TIME:
SPONSOR ORG: AOC	PROGRAM:	PURPOSE: TEST FLT #1 (JET)

ORD PERSONNEL

AC PLAYER	SYS ENG DuGRANRUT
CP MAXSON	DATA SYS PRADAS-BERGNES
NAV	RADAR
FE	BT/ODW GOLDSTEIN
RADIO	CLD PHYS
FD DAMIANO / CZYZYK	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/ORD

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
HOCK	DROPSONDE	NCAR
~~CAL~~ CHAMBERLAIN	"	NCAR
GRIFFIN	~~DROP~~ HARS	HRD
FRANKLIN	HARS	HRD
BARR	PILOT	GULFSTREAM
KITSON	MECH	AOC

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

ON GROUND QC1M Close to Zero

QC2M -4 mB

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OAOWF2 FILE

FLT ID: N960928 TIME OFF: 1639Z TIME ON: 2312Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1016.2	30.05	1015.7	

	NO	DATA DISPOSITION/DATE/QUALITY
1/SEC FLT LVL TAPES	#2	
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES		
AXBT		
AXCP		
~~ODW~~ GPS	4	

PHOTOGRAPHY

	FWD	LS	RS	VERT	
ON					
OFF					
RATE					

REMARKS

NOAA FORM 59-4
(2-72)

N960928 (JET)

TIME	LAT	LON	TRK	HD	WD	WS	TA	TD	GA	PA	RS	
165531			start	180	leg at 20K							
165830							-10.6				462	56
165951			start	210	leg at 20K					+T2 WARMEST		
170200												
170500			start	240	leg at 20K						463	
170840												
171040			YAW		at 210 IAS							
171235												
171400			PITCH		at 210 IAS							
171530												
181500			start	180	leg at 35K							
181810			end									
182100			start	210	leg at 35K					236 mb		
182410												
182600			start	240	leg at 35K							
182900												
183710			start	180	leg at 40K							40826 ft
184040										185 mb	-52.8	34.9%
184821			start	210	leg at 40K							
185112										sonde drop	26.5	83.4
185300			end	210	leg at 40K						190407 splash	
185350			YAW									
185530												
185535			Pitch									
185730												
190120			start	240	leg at 40K							
190430												
191020			START	180	leg at 45K						145 mb	-67.8
191329											14449	34.4%
192210			START	210	leg at 45K						47404	
192519												
192630			DROP 2		~ 26 59		83 30			194030 SPLASH		
194520			.75 MACH									
200302			DROP 3		27 00 N		82 46 W			201230 SPLASH		

$$W1 = WP3 - [TAS \sin(\phi - \alpha)]$$

$$W2 = WGS - WAS$$

$$WI = WP3 - [TAS \sin(\phi - \alpha)]$$

NOAA FORM 59-4
(2-72)

N960928

202540	DROP 4	26 58	82 47		
202734	DEVIATE SOUTH				
202930	SPIRAL DOWN	26 38	83 04	-205230 end descent	
203950	SPLASH 4				
205208	START LEFT CIRCLES				
5509	CIRCLE 1				
5822	CIRCLE 2				
210128	CIRCLE 3				
210302	START RIGHT CIRCLES				
210704	CIRCLE 1				
211043	CIRCLE 2				
211419	CIRCLE 3				
213116	TOUCHDOWN				
2138	BLOCK IN				

Aircraft Operations Center
P.O. Box 6829
MacDill AFB, FL 33608-0829

AOC1:ABD

September 27, 1996

MEMORANDUM FOR: All Gulfstream-IVSP Participants

FROM: A. Barry Damiano

SUBJECT: First Gulfstream-IVSP Calibration Flight

The first test flight (tentatively scheduled during the last three weeks of September) should be considered a "touchy feely" flight. It should allow for individuals to become familiar with their own station settings as well as the entire layout of the aircraft. This flight will be relatively short in duration (approximately 4 hours) and will consist of the following activities:

1) Block out from Hangar 5 at 1145 local time.

2) After take-off climb to 20000 feet pressure altitude (PA) and head to a point over land east of NWS Ruskin (27° 43' N 82° 27' W). If ATC will not allow that then we head west offshore west of NWS Ruskin.

3) Fly three (3) three minute legs varying indicated airspeed...180, 210 and 240 knots. The legs **are not** dependent upon wind direction. After the 210 indicated airspeed leg is completed, a yaw (side to side) maneuver will be performed varying heading by 15-20 degrees and minimizing excursions in roll. After the yaw maneuver, a pitch maneuver varying pitch ± 5 degrees will be performed. After the pitch maneuver, increase indicated airspeed to 240 knots.

4) Upon completion of the 240 indicated airspeed leg at 20000 feet PA, the aircraft will climb to 25000 feet PA and perform the three (3) three minute legs varying indicated airspeed...180, 210 and 240 knots.

5) Upon completion of the 240 indicated airspeed leg at 25000 feet PA, the aircraft will climb to 30000 feet PA and perform the three (3) three minute legs varying indicated airspeed...180, 210 and 240 knots.

6) Upon completion of the last leg at 30000 feet PA, the aircraft will climb to 35000 feet PA and perform the three (3) three minute legs varying indicated airspeed...180, 210 and 240 knots.

7) Upon completion of the 240 indicated airspeed leg at 35000 feet PA, the aircraft will climb to 40000 feet PA and perform the three (3) three minute legs varying indicated airspeed...180, 210 and 240 knots. At the beginning of the 210 indicated airspeed, a GPS sonde will be launched. This will coincide approximately with a radiosonde launch from NWS Ruskin. The purpose of deploying sondes is to exercise the AVAPS system and test the communication link by transmitting sonde data through the SATCOM system. After the 210 indicated airspeed leg is completed, a yaw (side to side) maneuver will be performed varying heading by 15-20 degrees and minimizing excursions in roll. After the yaw maneuver, a pitch maneuver varying pitch ± 5 degrees will be performed. After the pitch maneuver, increase indicated airspeed to 240 knots. After the three minute leg at 240 knots is completed climb to 45000 feet PA.

8) At 45000 feet PA do the three (3) three minute legs varying indicated airspeed...180, 210 and 240 knots. Near the end of the 210 indicated airspeed run, a GPS dropsonde will be launched as the jet heads west away from the coast and increases indicated airspeed to 240 knots. After the three minute 240 knot leg is completed, the jet will slow to .80 Mach. After loss of the sonde signal, the jet will reverse heading. As the jet nears the coast, airspeed will decrease to .75 Mach, and another GPS sonde will be deployed. The jet will continue on a eastbound heading until the sonde signal is lost. The jet will reverse heading and head toward NWS Ruskin. Over or near NWS Ruskin a GPS sonde will be launched and after a few minutes the jet will begin a spiral descent at a rate of 1500 feet per minute. The descent will continue to 10000 feet PA.

4 KTS

NEAR RELEASE PT OF 3rd SONDE

9) After reaching 10000 feet PA, the jet will commence three (3) left turn circles then three (3) right turn circles at a 25° roll angle.

10) Upon completion of the circles the aircraft will return to MacDill AFB.

LEFT SPIRAL